

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3171618****Date:27/12/2021****Subject Name:Blockchain****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) What do you mean by blocks in block chain technology?	<b>03</b>
	(b) Blockchain is a distributed database. How does it differ from traditional databases?	<b>04</b>
	(c) Briefly discuss what are the different types of Block chains?	<b>07</b>
<b>Q.2</b>	(a) List the key features of blockchain?	<b>03</b>
	(b) Differentiate between permissioned blockchain v/s permissioned less blockchain.	<b>04</b>
	(c) Explain Components of the blockchain.	<b>07</b>
<b>OR</b>		
	(c) Explain and Difference between Bit coin block chain and Ethereum Block chain?	<b>07</b>
<b>Q.3</b>	(a) Name some popular platforms for developing blockchain applications.	<b>03</b>
	(b) What is the difference between blockchain and database?	<b>04</b>
	(c) Explain Proof-of-work v/s Proof-of-stake protocol.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) What are the limitations of blockchain?	<b>03</b>
	(b) What are the Merkle trees? What is its importance in blockchain?	<b>04</b>
	(c) Explain in detail types of cryptocurrency.	<b>07</b>
<b>Q.4</b>	(a) Justify Answer Is block chain good for banks?	<b>03</b>
	(b) What are the challenges of blockchain technology?	<b>04</b>
	(c) Discuss Key characteristics of Consortium Blockchain in detail.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What is encryption? What is its role in Blockchain?	<b>03</b>
	(b) What is Consensus algorithm? What are the types of consensus algorithms?	<b>04</b>
	(c) Explain in detail Digital Signature in blockchain.	<b>07</b>
<b>Q.5</b>	(a) Where is a block chain stored? What are the types of records that are present in the block chain database?	<b>03</b>
	(b) Briefly discuss advantage of Cryptocurrency.	<b>04</b>
	(c) Discuss in detail Smart Contract in Ethereum.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) List out the real time application of Block chain.	<b>03</b>
	(b) What is a ledger? Is Blockchain an incorruptible ledger?	<b>04</b>
	(c) What is Cryptocurrency? Explain Conventional vs. digital currency.	<b>07</b>

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